

Honors Calculus 3: homework # 3

Due day: Tuesday, February 15, 2010, recitations

Problem 1: Prove that $\sqrt{2} + \sqrt{3}$ is irrational.

Problem 2: Let $f(x) = x_i/|x|$ for $0 \neq x \in \mathbb{R}^n$. Find $\partial f/\partial x_j$. Here $|x| = \sqrt{x_1^2 + \dots + x_n^2}$.

Problem 3: 11.4.6

Problem 5: 11.4.35